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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/023,455	12/17/2001	Takao Ohnishi	796 007	2269
25191	7590	10/10/2006	EXAMINER	
BURR & BROWN PO BOX 7068 SYRACUSE, NY 13261-7068			LUDLOW, JAN M	
			ART UNIT	PAPER NUMBER
			1743	

DATE MAILED: 10/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	10/023,455	OHNISHI ET AL.	
	Examiner	Art Unit	
	Jan M. Ludlow	1743	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 17 July 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,2,4-8 and 10-13 is/are pending in the application.
- 4a) Of the above claim(s) 13 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-8 and 10-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 April 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

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1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1-2, 5-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ogura (6592819) in view of WO 99/22867 (hereafter WO).

Ogura teaches a prior art method of forming an array by providing a module 30 with a two dimensional array of spotting units 31 used to produce an array on a single substrate. See, e.g., Figures 3-4.

Ogura fails to teach or suggest simultaneous spotting on plural substrates.

WO teaches a method of making arrays on plural array regions by jetting (e.g., p. 4, line 32) from modules 76, 80, each having plural jetting heads 38, 40, wherein the respective "supports" are the rows of rectangular areas shown (Figure 5). Deposition is in "parallel" (p. 5, line 26), which Webster's defines as relating to tasks performed simultaneously (p. 853, <sup>2</sup>parallel, definition 2c).

It would have been obvious to one of ordinary skill to provide plural modules with, e.g., 2x2 injection unit arrays over plural substrates in the prior art invention disclosed by Ogura in order to simultaneously spot plural substrates as taught by WO. It would have been further obvious to use ink jet heads in place of spotting pins as taught by WO. It would have been obvious to provide a second set of substrates and modules next to the first set of substrates and modules, forming a two dimensional array of substrates and modules, in order to spot more substrates simultaneously as was known in the art, i.e., to provide two spotting apparatus side by side on a bench top to double throughput.

5. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ogura and WO as applied to claims above, and further in view of Gamble and/or Hirota.

WO fails to teach a piezoelectric ink jet device of the claimed structure.

Gamble (Figs. 2-3) and/or Hirota (Fig. 2) teach piezoelectric ink jet devices for producing arrays.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the ink jet device of Gamble and/or Hirota in the method of Ogura and WO in order to provide a known ink jet device for forming arrays for its known purpose, the use of an ink jet being taught by WO.

6. Claims 7-8, 11-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ogura and WO as applied to claims above, and further in view of Bass.

WO fails to teach cutting the substrate to form separate chips.

Bass teaches a multiple ejector method for making arrays similar to that of WO. After formation of plural arrays, the substrate is cut to make separate chips (Fig. 6).

It would have been obvious to cut the substrate(s) of Ogura and WO in order to form separate chips as taught by Bass.

7. Claims 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ogura and WO and Hirota and/or Gamble as applied to claims above, and further in view of Bass.

WO fails to teach cutting the substrate to form separate chips.

Bass teaches a multiple ejector method for making arrays similar to that of WO. After formation of plural arrays, the substrate is cut to make separate chips (Fig. 6).

It would have been obvious to cut the substrate(s) of Ogura and WO in order to form separate chips as taught by Bass.

8. Applicant's arguments filed July 17, 2006 have been fully considered but they are not persuasive.

9. Applicant argues that neither Ogura nor WO '867 teaches a two dimensional array of substrates and modules, but providing two of the apparatus of WO '867 side by side provides a two dimensional array of substrates and modules, and it would have been obvious to provide two apparatuses to do twice the work as is clear from common sense reasoning.

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jan M. Ludlow whose telephone number is (571) 272-

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1260. The examiner can normally be reached on Monday-Thursday, 11:30 am - 8:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill A. Warden can be reached on (571) 272-1267. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Jan M. Ludlow  
Primary Examiner  
Art Unit 1743

Jml

October 2, 2006